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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,127	03/27/2001	Mike Blossfeld	TRW(TE)4704	8617

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EXAMINER	
KLAUS, LISA NHUNG	
ART UNIT	PAPER NUMBER

2832

DATE MAILED: 03/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/818,127

Applicant(s)
Mike Blossfeld

Examiner
Lisa Nhung Klaus

Art Unit
2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenmochi (US 6,084,190) figure 10.

Kenmochi discloses a key pad comprising:

- a depressible member 1d having an unactuated condition and an actuated condition;
- first membrane 1c connected with said depressible member, said first membrane resisting movement of said depressible member from said unactuated condition to said actuated condition, said first membrane further providing an increasing return force urging said depressible member to said unactuated condition as an operator moves said depressible member from said unactuated condition to said condition; and
- a second membrane 12 resisting movement of said depressible member to said actuated condition, said second membrane further providing an increasing return force to said depressible member as the operator moves said depressible member to said actuated condition;
- first membrane initially acting alone; 1c
- wherein said first and second membranes are configured to have a concave surface facing away from said depressible member in said unactuated condition
- wherein said second membrane is at least partially metal;

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- said first membrane acting simultaneously with said second membrane;
- an electrical switch contact 12 adjacent said second membrane.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenmochi in view of Chuang (US 6,166,662).

Kenmochi discloses the invention as claimed. However, Kenmochi does not disclose a first membrane having a first end and a second end fixed to a lower surface of a depressible member.

Chuang discloses a key pad comprising:

- first membrane has a first end fixed to a lower surface of a depressible 11 and a second end, opposite said first end, sliding along a planar surface as said depressible member moves from said unactuated condition to said actuated condition;

- wherein said second end of said first membrane slides in a direction transverse to the direction of movement of said depressible member.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the third membrane as taught by Chuang with Kenmochi's switch for the purpose of pushing the push button back to the original position.

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Allowable Subject Matter

5. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to show a third membrane enclosing a first and second membrane.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Viebrantz (US 4,952,761) discloses a switch comprising a membrane 14 initially acting alone.
- Audo (US 6,303,887) discloses a switch comprising a membrane 1c initially acting alone.
- Souliere (US 5,389,757) discloses a switch comprising a membrane 54 initially acting alone.
- Frederick Steiner (GB 2100517) discloses an electric push button switch comprising a first membrane 32 and a second membrane 15.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Nhung Klaus (formerly Nhung Nguyen) whose telephone number is (703)305-0422 and fax number is (703)746-4148. In the event that I am not reached, you can contact my supervisor, Mrs. Paula Bradley at (703)308-2319, or the group receptionist at (703)308-1782.

LK

Lisa Nhung Klaus

Patent Examiner - Art Unit 2832

February 16, 2002


P. AUSTIN BRADLEY
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